

Amendments to the Claims

Claim 1–13 (canceled)

Claim 14 (Currently amended). A switching mode power supply comprising:

a transformer,
a transistor operably coupled to switch current through a primary of the transformer, and
a control unit comprising a first comparator and a second comparator configured to control the switching of the transistor to generate current pulses through the transformer, the control unit further configured to receive a signal related to power drawn by a load from a secondary side of the transformer and the first comparator configured to compare the signal with a first threshold level and the second comparator configured to compare the signal with a second threshold level, two threshold levels defining a range, the control unit configured to enable switching of the transistor in the case that a characteristic of the signal is outside the range in a first direction, and disabling switching of the transistor in the case that the characteristic of the signal is outside the range in a second direction.

Claim 15 (Previously presented). The switching mode power supply according to claim 14 wherein the characteristic of the signal is inversely related to power drawn by a load coupled to the secondary side, and wherein the control unit is further configured to enable switching when the characteristic of the signal is above a first threshold value, and disable switching of the transistor in the case that the characteristic of the signal is below a second lower threshold value.

Claim 16 (Previously presented). The switching mode power supply according to claim 14 wherein the characteristic of the signal is directly related to the power drawn by a load coupled to the secondary side, and wherein the control unit is further configured to enable switching when the characteristic of the signal is above a first threshold value, and disable switching of the transistor in the case that the characteristic of the signal is below a second lower threshold value.

Claim 17 (Previously presented). The switching mode power supply according to claim 14 further comprising a blanking window definition circuit configured to prevent the control unit

from disabling switching of the transistor in the case that the signal is below the second lower threshold value for less than a preset period of time.

Claim 18 (Previously presented). The switching mode power supply according to claim 14 further comprising a current limitation circuit arranged to receive a second signal indicative of the current through the primary of the transformer and to limit the current pulses if the second signal indicates that the current through the primary of the transformer is above a threshold value.

Claim 19 (Previously presented). The switching mode power supply according to claim 18 further comprising a memory device for storing data indicating whether the switching mode power supply is operating in a first power supply mode, and arranged to enable the current limitation circuit only in the case that the power supply is operating in first power supply mode.

Claim 20 (Previously presented). The switching mode power supply according to claim 19, wherein the memory device comprises a flip flop.

Claim 21 (Previously presented). The switching mode power supply according to claim 20, wherein the current limitation circuit further comprises a logic gate coupled to receive a logic signal indicative of the power supply mode from the flip flop, the logic gate further coupled to receive an indication of whether the current through the primary of the transformer is above the threshold value.

Claim 22 (Currently amended). A switching mode power supply comprising:

- a transformer,
- a transistor coupled to control the current through a primary of the transformer,
- a control unit configured to control switching of the transistor to generate current pulses in the transformer,
- a memory device for storing data indicating whether the switching mode power supply is operating in a ~~first-power~~ burst supply mode, and

a current limitation circuit arranged to receive a first signal indicative of the current through the primary of the transformer and to limit the current pulses if the first signal indicates that the current is above a burst mode threshold value and the memory device indicates that the switching mode power supply is operating in the ~~first power~~ burst supply mode.

Claim 23 (Previously presented). The switching mode power supply according to claim 22 wherein the control unit is a single integrated circuit logic device.

Claim 24 (Previously presented). The switching mode power supply according to claim 23 wherein the threshold value is on a value received at a pin input of the logic device.

Claim 25 (Previously presented). The switching mode power supply according to claim 23 wherein the threshold value has a value determined by an internal reference voltage of the integrated circuit.

Claim 26 (Currently amended). A method of operating a power supply, the power supply having a transformer, a transistor controlling the current through the primary of the transformer, and a control unit for controlling the switching of the transistor to generate current pulses in the transformer, the method including:

a) receiving a signal related to power drawn by a load from a secondary side of the transformer and comparing ~~a characteristic of~~ the signal with two threshold levels, the two threshold levels defining a range ~~therebetween~~, and

b) enabling switching of the transistor in the case that the characteristic of the signal is outside the range in a first direction, and disabling switching to the transistor in the case that the characteristic of the signal is outside the range in a second direction.

Claim 27 (Previously presented). The method according to claim 26, wherein the characteristic of the signal is inversely related to power drawn by a load coupled to the secondary side, and wherein step b) further comprises enabling switching when the characteristic of the signal is above a first threshold value, and disabling switching of the transistor in the case that the characteristic of the signal is below a second lower threshold value.

Claim 28 (Previously presented). The method according to claim 26, wherein the characteristic of the signal is directly related to the power drawn by a load coupled to the secondary side, and wherein step b) further comprises enabling switching when the characteristic of the signal is above a first threshold value, and disabling switching of the transistor in the case that the characteristic of the signal is below a second lower threshold value.

Claim 29 (Previously presented). The method according to claim 26, wherein the characteristic of the signal comprises a magnitude of the signal.

Claim 30 (Previously presented). The method according to claim 26, further comprising preventing the control unit from disabling switching of the transistor in the case that the signal is below the second lower threshold value for less than a preset period of time.

Claim 31 (Previously presented). The method according to claim 26, further comprising:

c) receiving a second signal indicative of the current through the primary of the transformer and limiting the current pulses if the second signal indicates that the current is above a threshold value.

Claim 32 (Previously presented). The switching mode power supply according to claim 31 further comprising performing step c) only in the case that the power supply is operating in a first power supply mode of a plurality of power supply modes.

Claim 33 (Currently amended). A method of operating a power supply having a transformer, a transistor controlling the current through a primary of the transformer, and a control unit for controlling the switching of the transistor to generate current pulses in the transformer, the method comprising:

a) receiving a signal indicative of the current through the primary of the transformer, and
b) limiting the current pulses if the signal indicates that the current is above a threshold value and if the power supply is operating in a ~~first power supply~~ burst mode of a plurality of power supply modes.

Claim 34 (New). A switching mode power supply comprising:

a transformer,

a transistor operably coupled to switch current through a primary of the transformer,

a control unit configured to control the switching of the transistor to generate current pulses through the transformer, the control unit further configured to receive a signal from a secondary side of the transformer and compare the signal with the two threshold levels defining a range, the control unit configured to enable switching of the transistor in the case that a characteristic of the signal is outside the range in a first direction, and disabling switching of the transistor in the case that the characteristic of the signal is outside the range in a second direction,

a current limitation circuit arranged to receive a second signal indicative of the current through the primary of the transformer and to limit the current pulses if the second signal indicated that the current through the primary of the transformer is above a threshold value, and

a memory device for storing data indicating whether the switching mode power supply is operating in a first power supply mode, and arranged to enable the current limitation circuit only in the case that the power supply is operating in first power supply mode, wherein the memory device comprises a flip flop,

wherein the current limitation circuit further comprises a logic gate coupled to receive a logic signal indicative of the power supply mode from the flip flop, the logic gate further coupled to receive an indication of whether the current through the primary of the transformer is above the threshold value.